

Claims

Sub B1

- ~~1. A composite comprising *Parthenium* spp. plant material and plastic.~~
2. The composite of claim 1, wherein the *Parthenium* species comprises *Parthenium argentatum*, *Parthenium tomentosum* or *Parthenium incanum*.

Sub C2

- ~~3. The composite of claim 1, wherein the *Parthenium* spp. plant material comprises (a) whole plant material, (b) plant part material, (c) bagasse, or (d) a combination of (a) - (c).~~
4. The composite of claim 1, wherein the *Parthenium* spp. plant material is processed.
5. The composite of claim 4, wherein the plant material is processed by a mechanical or chemical reduction process.

Sub C3

- ~~6. The composite of claim 4 wherein the processed *Parthenium* spp. plant material comprises fibers, fiber bundles, particles, flour, chips, flakes, fines, sawdust, pellets, strands, wafers or combinations thereof.~~
7. The composite of claim 1, wherein the plastic is thermoplastic.
8. The composite of claim 7, wherein the thermoplastic is acrylonitrile-butadiene-styrene; acetal; nylon, including polyamide; high and low density polyethylene, including co-polymers; polypropylene, including co-polymers; polystyrene; or vinyl.

9. The composite of claim 7, wherein the ratio of thermoplastic to plant material ranges by weight from 95% thermoplastic:5% plant material to 5% thermoplastic:95% plant material.

10. The composite of claim 1, wherein the plastic is thermoset.

11. The composite of claim 10, wherein the thermoset is alkyd; allylic; amino, including melamine and urea; epoxy; phenolic; polyester; silicone; or urethane.

12. The composite of claim 10, wherein the ratio of thermoset to plant material ranges by weight from 15% thermoset:85% plant material to 3% thermoset:97% plant material.

13. The composite of claim 1, wherein the plastic is virgin, recycled, or a combination of both virgin and recycled plastic.

14. The composite of claim 1, wherein the composite is made by the air-laying, melt-blending or compression molding method.

15. The composite of claim 1, wherein the composite is particle board or fiberboard.

16. The composite of claim 1, wherein the *Parthenium* spp. plant material further comprises plant material from a plant other than the genus *Parthenium*, added *Parthenium* spp. natural resin extract or combinations thereof.

17. The composite of claim 1, wherein the composite exhibits at least a 30% decrease in termite infestation relative to a composite not containing plant material derived from the genus *Parthenium*.

18. The composite of claim 1, wherein the composite exhibits a rating of resistant or highly resistant to *Gleophyllum trabeum* or *Poria placenta* decay fungi as determined by ASTM standard test D-2017.

add
A1

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